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REMARKS

This paper is responsive to the Office Action dated December 6, 2004 in the above identified application for United States Patent. Applicants wish to thank Examiner Donaghue for his assistance in discussing the claims with regard to the cited references in a telephone conversation on April 6, 2005. This paper is also responsive to that conversation. All rejections and objections of the Examiner are respectfully traversed. Reconsideration and further examination are respectfully requested.

The Examiner rejected claims 1-7, 10-16 and 19-20 as being obvious under 35 U.S.C. 103, citing the article "Active Storage Nets" by David Nagle ("Nagle"), in combination with United States patent number 6,400,730 of Latif et al. ("Latif et al."). Applicants respectfully traverse this rejection.

Nagle discloses a system in which client systems communicate with one or more network attached storage devices (NASDs) through active routers, and potentially also through one or more active switch and/or active hub devices. One or more Storage Area Networks (SANs) can be used to interconnect the devices through the Nagle system, to provide data transfers between the client systems and the network attached storage devices. As previously recognized, and again noted by the Examiner, Nagle provides no teaching of any system or method that includes encapsulating non-network protocol transactions into network protocol data units.

Latif et al. disclose a system for transferring data between IP devices, such as Gigabit Ethernet devices, and SCSI or Fibre Channel devices. Devices in the Latif et al. system may perform storage operations based on the SCSI Command Set. For a Fibre Channel device, SCSI

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commands and data are *converted* by Latif et al. to a *Fibre Channel Protocol for SCSI (FCP)* and transmitted using a Fibre Channel interface. For a SCSI device, the SCSI commands and data are transferred directly using a parallel bus. Latif et al. teach that *SCSI data is converted to FCP, and is not actually transmitted using a Fibre Channel interface*. In particular, Latif et al. describe a system in which SCSI commands and data may be *converted to FCP*. The FCP frame created by the Latif et al. system may then be *encapsulated in an IP packet*.

Nowhere in the combination of Nagle and Latif et al. is there disclosed or suggested any system or method for facilitating operations related to data storage between a first device and at least one data storage unit in a computer network, including:

. . . encapsulating [a] storage services protocol transaction into a payload portion of a network protocol data unit . . .

as in the present independent claim 1. Analogous features are also found in the present independent claim 10. In contrast, Nagle teaches away from any use of encapsulation in this regard, instead using *protocol conversion* between network protocols. Nagle includes no hint or suggestion of even the desirability of providing for encapsulation of one or more non-network protocol transactions into one or more network protocol data units processes network protocol data units while processing network protocol data units associated with operations based on storage services protocol set, as in the present independent claims 1 and 10.

The Examiner now relies on Latif et al. with regard to the above highlighted claim features. Applicants respectfully disagree, and assert that Latif et al. teaches *converting* SCSI commands into FCP network protocol packets, which may then be encapsulated by another network protocol packet. In this regard, Latif et al. states as follows beginning at line 24 of column 6:

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As shown in FIG. 2, each SoIP device 50 *converts SCSI commands and data into FCP data frames* in FCP block 52. The SoIP protocol layer block 54 *then encapsulates these FCP frames in multiple IP packets using either the User Datagram Protocol (UDP) or Transport Control Protocol (TCP)*. . . (emphasis added)

Thus Latif et al. teaches converting SCSI commands to a network protocol. FCP is described as a network protocol as follows beginning at line 14 of column 6:

FCP is an *FC-4 Upper Layer Protocol for sending SCSI commands and data over a Fibre Channel network* yielding a "serial" SCSI network. . . (emphasis added)

The encapsulation taught by Latif et al. is thus encapsulation of one network protocol data unit within another. For example, this is described at line 44 of column 11 of Latif et al.:

. . . The conversion *encapsulates the FCP data frame in an IP data frame* as described above. . . (emphasis added)

Moreover, Fig. 13 of Latif et al. illustrates the encapsulation of the FCP frame for transmission over Ethernet.

For the above reasons, Applicants respectfully submit that the combination of Nagle and Latif et al. does not disclose or suggest all the features of the present independent claims 10 and 1. Accordingly, the combination of Nagle and Latif et al. does not form the basis of a *prima facie* case of obviousness with regard to the present independent claims 1 and 10 under 35 U.S.C. 103. As to claims 2-7, 11-16 and 19-20, they each depend from claims 1 and 10, and are respectfully believed to be patentable over the combination of Nagle and Latif et al. for at least the same reasons.

The Examiner also rejected claims 8-9 and 17-18 for obviousness under 35 U.S.C. 103, again citing the combination of Nagle and Latif et al., and further citing sections from Chapter 7

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of "Security in Computing" by Pfleeger ("Pfleeger"). Applicants respectfully traverse this rejection.

As noted previously, Pfleeger describes the principles underlying design of trusted operating systems, and lists auditing and logging within the security features of trusted operation systems. Like Nagle and Latif et al., Pfleeger includes no disclosure or suggestion of any system or method for facilitating operations related to data storage between a first device and at least one data storage unit in a computer network, including:

... encapsulating [a] storage services protocol transaction into a payload portion of a network protocol data unit ...

as in the present independent claims 1 and 10, from which claims 8-9 and 17-18 depend. The Pfleeger reference is not specifically directed towards providing storage information over a network, and does not present solutions specific to moving storage transactions through disparate protocols in a networked environment.

For the above reasons, Applicants respectfully urge that the combination of Nagle, Latif et al. and Pfleeger does not disclose or suggest all the features of the present independent claims 1 and 10, from which claims 8-9 and 17-18 depend. Accordingly, the combination of Nagle, Latif et al. and Pfleeger does not support a *prima facie* case of obviousness under 35 U.S.C. with regard to the present independent claims 1 and 10. As claims 8-9 and 17-18 depend from claims 1 and 10, they are respectfully believed to be patentable over the combination of Nagle, Latif et al. and Pfleeger for at least the same reasons.

Reconsideration of all pending claims and withdrawal of all rejections are respectfully requested.

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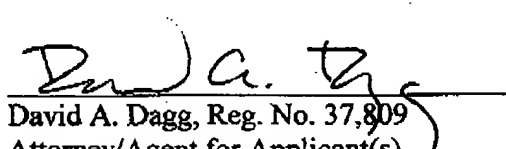
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Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone David A. Dagg, Applicants' Attorney at 617-630-1131 so that such issues may be resolved as expeditiously as possible.

For these reasons, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date

  
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